Higher Education Funding Council for England

Title	Engineering conversion course pilot scheme – Invitation to apply for funding
To	Heads of HEFCE-funded higher education institutions Heads of directly HEFCE-funded further education colleges
Of interest to those responsible for	Engineering and Computer Science schools, departments and faculties
Reference	Circular letter 25/2015
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Enquiries to	Darren Watson, email engineeringconversion@hefce.ac.uk

Dear Vice-Chancellor or Principal

Engineering conversion course pilot scheme – Invitation to bid for funding

1. This letter invites applications for new HEFCE funding to support the development of conversion courses in engineering, including engineering-related computer science, via a pilot scheme. This follows the announcement in the Government's Science and Innovation Strategy published in December 2014 that HEFCE is to work with the engineering profession 'to develop and pilot engineering conversion courses for non-engineering graduates'.

2. During 2015-16 £1.5 million is available to support development of the courses during the remainder of academic year 2015-16, with delivery of the pilot courses commencing in academic year 2016-17. This sum includes funding from the Department of Business, Innovation and Skills (BIS) and from HEFCE. In addition to this sum, £300,000 has been made available by the Digital Economy Unit in the Department of Culture, Media and Sports to fund engineering-related computer science pilots on a similar basis within this scheme.

3. Bids from HEFCE-funded higher education institutions (HEIs) and further education colleges (FECs) should be submitted by **Friday 27 November 2015** using the template at Annex A.

Funding

4. It is anticipated that the available budget of £1.8 million during 2015-16 will enable us to support approximately 30 engineering projects and up to a further 6 engineering-related computer science courses. Funding to individual institutions for a single course is expected to be for no more than £50,000, which reflects our contribution to the development of a conversion course. Institutions submitting a bid to develop more than one course, and therefore substantially increasing the number of students entering such provision, may bid up to a maximum of £100,000. Institutions may also submit collaborative proposals with other partners; the combined value of a collaborative bid should also be to a maximum of £100,000, with individual institutions bidding for no more than £50,000. The scale of funding must be proportionate to the number of partners in a collaboration. Institutions may lead one bid and also be part of a second, separate

collaborative bid. Payments will be made available over the period January 2016 to July 2016, with all funding to be spent by end December 2016.

5. We will provide funding as follows:

   a. Collaborative proposals, through a lead institution, will be welcomed, for example collaborations between HEIs or FECs delivering to geographically dispersed students.

   b. Institutions can lead no more than one bid, but may also be part of a separate collaborative bid.

   c. The HEFCE funding is expected to contribute to the costs of development, internal validation, advertising and promotion of the courses.

   d. We expect bids to lever in additional funding to cover the development costs, including from bidding institutions.

   e. Courses will then be funded and sustained through fee income, teaching grant and, where appropriate, employer contributions.

   f. While this is a one year pilot scheme, we would expect institutions to commit to the development and delivery of conversion courses over a number of years.

Engineering research

6. On the advice of representatives from the Royal Academy of Engineering, the Institution of Engineering and Technology, the BCS, the Engineering Council (EngC) and the Engineering Professors' Council (EPC), HEFCE has commissioned research in order to provide information on the current engineering landscape. The research, 'Transition to Engineering', sought to establish what employers in different sectors and with different characteristics look for in new graduates and in existing employees who are looking to re-skill. This report is available for reference on the HEFCE website at www.hefce.ac.uk/pubs/rereports/Year/2015/engineering.

7. The research highlights that graduates from a range of educational backgrounds may be able to undertake an engineering conversion course and go on to have a successful career in various engineering sectors. It points out that:

   a. Graduates from physics and mathematics are particularly able to convert, and conversion courses exist already that recruit graduates from these disciplines.

   b. Graduates from other disciplines may be able to enter the engineering sector following a conversion course, for example biology/biological sciences, chemistry/chemical sciences, material science, or geology/geological sciences. An example is biology or chemistry graduates converting to agricultural engineering.

   c. Conversion courses in a range of engineering disciplines could provide the breadth of engineering knowledge and understanding to meet employer demand, including:

      - electrical and electronic engineering
      - manufacturing engineering
      - mechanical engineering
      - civil engineering
      - agricultural engineering

- additive manufacturing.

8. Although these were the areas highlighted in the report, this is not an exhaustive list of subject areas in which HEFCE will accept bids, and we welcome bids in other engineering areas, provided there is clear evidence of student and employer demand.

Engineering-related computer science

9. In relation to engineering-related computer science courses, we are particularly seeking bids for courses in disciplines where the Digital Economy Unit has identified that there is significant industry demand. These disciplines include but are not limited to data science, cyber security and software engineering design and development.

Employers

10. Some institutions may be seeking to build upon well established relationships with employers to support the employability of their graduates and longer-term business growth, while others may be seeking new opportunities to collaborate with industry. Institutions will therefore be aware of opportunities beyond those identified in the research report, which could be addressed by a conversion course. We welcome bids that propose the involvement of employers. This involvement could take a number of different forms: for example, sponsorship, co-delivery, course design, industry placement, or other forms of support or partnership.

11. For engineering-related computer science conversion courses, in addition to welcoming strong employer involvement in course design, we also welcome in particular those courses where there is a strong element of industry placement for students, where appropriate.

Purpose of the pilot scheme

12. The primary purpose of the scheme is to enable HEIs and FECs to develop more courses that support non-engineering graduates in pursuing a career in engineering or in engineering-related computer science. We wish to support innovative approaches to increase the number of graduates pursuing these subjects at postgraduate level and developing careers in these areas. We will therefore be evaluating the scheme and reporting on the outcomes, with a view to securing wider take up across the sector.

Criteria for applications for funding

13. The assessment criteria for applications to the scheme has been developed following discussions with representatives of the engineering sector, employers, professional bodies, and institutions.

14. Bids will need to address of the following points:

a. **Rationale and framework of the proposal**

i. Bids should include an outline of the proposed course/s including approximately how many credits the provision will equate to; level/s, subject/s, outcomes; how long the period of study will be; whether delivered full or part time; what the entry requirements are likely to be; and when delivery would commence.

ii. **Level/s** – We anticipate that the majority of proposed provision will be at masters level (Framework for HE Qualifications Level 7). However, institutions may wish to propose a pilot course at Level 6 or one that contains an element at that

level, or which focuses on preparing graduates for further study at postgraduate level, where there is a clear rationale. Course output standards should be devised with reference to relevant benchmarks[1].

iii. **Subject/s** – Applications may focus on a single sub-discipline or a range of them – this should be indicated in the submission. They should also outline any additional support planned for students, for example in helping them to acquire the underpinning concepts and/or skills necessary to successfully undertake the course.

iv. **Outcomes** – It is expected that funded engineering conversion courses will enable an increased number of graduates from non-engineering programmes to pursue a career in engineering, and work towards achieving professional registration i.e. be recognised across the profession, including by employers. Likewise, funded courses in engineering-related computer science should enable an increased number of graduates from other subjects to pursue a career in these sectors.

b. **Students**

i. Bids should explain how the institution will identify and target the potential intake of graduates into the course.

ii. Institutions should satisfy themselves that students have the aptitude to succeed on these courses and consider the potential supply of entrants to the course. Some graduates with appropriate skills and knowledge may be working in firms in these sectors in other roles, and may be able to successfully undertake a conversion course on the basis of their experience in work. Others may have studied cognate disciplines.

iii. Bids should give a clear estimate of how many students they plan to recruit. They should also indicate how the course, if successful, might develop further, including projected growth in student numbers.

c. **Funding and finance**

i. The funding available is for course development and to meet advertising and promotion costs only: the costs of the provision itself should be funded by institutions through fee income, teaching grant and, where appropriate, employers.

ii. We welcome bids that include innovative funding models, or would enable students to access employer sponsorship or other funding, including the proposed loans for taught postgraduate courses on which the Government has recently consulted[2].

iii. Institutions may wish to propose collaborative approaches to advertising and promotion.

iv. Bids should provide information on the expected outputs and outcomes directly resulting from the funding, and those resulting from the delivery of the funded course/s.

v. The value for money from the proposed development relative to the anticipated outputs and outcomes and expected benefits to the target groups should be demonstrated. Bids should set out the funding requested relative to the total

programme spend, and any additional funding contribution from the institution/s or employers.

vi. A description of how the activity would be sustained and developed beyond the funding period is also required.

vii. Bids should include a financial statement, using a full economic costing approach, showing the total costs of the programme of activities (identifying separately the direct and indirect costs), and how the funding from different sources will be deployed, taking into account the fee that will be charged to students and other sources.

d. **Professional recognition** – The expectation is that those graduates who complete conversion courses should exit having reached a standard that is recognised across the engineering and other relevant sectors and would support them in taking their next steps in their career or studies. Engagement with the relevant professional engineering institution or institutions (PEIs) licensed by the Engineering Council is encouraged during the development of the conversion courses to ensure that individuals graduating from these conversion courses are well-prepared for engineering and engineering-related computer science careers.

e. **Employer and sector engagement** – Graduates from the courses must be highly employable. This can best be assured through the involvement of employers in appropriate aspects of the design and/or delivery of the courses and through the provision of additional support for the students in line with institutions' employability frameworks and policies.

i. We welcome proposals that offer work experience or other forms of engagement with employers and/or the workplace.

ii. Bids should contain information on how the course will fit with the priorities of partners and stakeholders, including employers and the community that the institution serves. This should include evidence of demand from employers.

iii. There should be a clear rationale for the focus of the development, such as evidence of the need for engineers in a particular sector, industry, discipline or geographical area.

f. **Experience and resources** – Bids should provide evidence that the institution/s have expertise in delivering provision in the relevant sub-discipline and at the levels proposed. They should show how resources from across the institution/s, and from wider delivery networks, will be brought together to develop and deliver the course/s. This will include any additional support for students.

g. **Pedagogy and delivery model** – It is anticipated that many institutions will propose courses that are delivered face-to-face in existing engineering schools, departments or faculties, or equivalent for engineering-related computer science conversion courses, as they will already have resources and staffing in place. We will, however, welcome bids that focus on innovative delivery models, for instance models which make use of employer resources and locations, or delivery that includes distance learning elements.

h. **Additionality** – it is expected that bids will primarily focus on new courses. However, institutions may wish to build on or scale up existing conversion courses, or extend delivery

of these to other areas or institutions. Should this be the case, bids will need to demonstrate the additionality of the expanded provision, and explain why this cannot be undertaken without funding under this scheme.

i. **Risks and mitigations –** a summary of the key risks of the proposed programme of activities and key mitigating actions.

Eligibility

15. A list of frequently asked questions is available on the HEFCE website at www.hefce.ac.uk/kess/engineer/faq.

16. Where institutions propose to work directly with businesses, they should satisfy themselves that their activities fit within state aid, taxation and Charity Commission regulations.

Application, selection process and timescales

17. HEIs and FECs that wish to bid for funding are invited to complete the template at Annex A, which can be downloaded from the HEFCE website alongside this letter at www.hefce.ac.uk/pubs/year/2015/CL,252015/, and email it to engineeringconversion@hefce.ac.uk by **noon on Friday 27 November 2015**.

18. Proposals should not exceed the maximum length specified in the template. There should be no annexes except those for the purposes of Freedom of Information (FOI) (see paragraphs 22-25) or those including letters of support.

19. Proposals will initially be assessed by HEFCE staff. The assessments will then be considered by a panel with representation from the Engineering Council and the Engineering Professors' Council, supported by HEFCE. The panel will agree the rankings for all proposals, and make recommendations to the HEFCE Chief Executive for approval. Recommendations will be based on the ranked list, and on the desirability, given that this is a pilot initiative, of ensuring a sufficient diversity of projects and approaches.

20. The timescale for the engineering conversion course pilot scheme is as follows:

Date	Event
27 November 2015	Deadline for submission of proposals
30 November to 21 December 2015	Scrutiny and assessment of bids by internal assessors and then an assessment panel
w/c 4 January 2016	Recommendations to the HEFCE Chief Executive
Early to mid January 2016	Decision and awards communicated to institutions
January 2016	First half of funding paid to successful institutions Development of conversion courses begins
April 2016	Second half of funding paid to successful institutions
Academic year 2016-17	Students on courses
October or December 2016	Status reports submitted by institutions to HEFCE
December 2016	Spending of HEFCE funding completed
2017	Evaluation

Monitoring arrangements

21. As this is a pilot scheme, we are keen to share emerging good practice and examples of what works across the sector. All lead institutions will be requested to submit a report in October or December 2016 following the end of the funding. These reports will form the basis of a full evaluation. We will expect all recipients of funding, including individual collaborating institutions, to contribute to this evaluation, as well as to a series of workshops we will be holding during the funding period. We will provide further guidance in due course. All recipients of funding will be required to confirm that they have used the funds as specified in this circular letter.

Freedom of Information Act 2000

22. Information provided in response to a request, invitation or consultation from HEFCE may be made public, under the terms of the Freedom of Information Act or of an appropriate licence, or through another arrangement. Such information includes text, data and datasets. The Freedom of Information Act gives a public right of access to any information held by a public authority defined within the Act, in this case HEFCE. It applies to information provided by individuals and organisations, for example universities and colleges. HEFCE can refuse to make such information available only in exceptional circumstances. This means that data and information are unlikely to be treated as confidential except in very particular circumstances. In addition, the project, and the pilot courses developed as a result of this funding, will be subject to evaluation, and information arising from this work may contribute to a published report.

23. Institutions can, if they wish, provide potentially sensitive information (such as information relating to commercial interests) in a separate annex attached to the application form. This will highlight to us that there are concerns over disclosure. With these annexes, the proposal must not exceed the maximum length as stated in the application template, not including letters of support.

24. Our assumption will be that all information in the main application documents can be disclosed on request. Please note, however, that under certain circumstances we may also be legally obliged to disclose information supplied as an annex.

25. Further information about FOI can be found on the Information Commissioner's website: www.ico.org.uk.

Yours sincerely

Professor Madeleine Atkins
Chief Executive

[1] The Engineering Council's learning outcomes for accredited degrees published in the Accreditation of HE Programmes third edition, www.engc.org.uk/engcdocuments/internet/Website/Accreditation%20of%20Higher%20Education%20Programmes%20third%20edition%20(1).pdf

[2] BIS, Postgraduate study: student loans and other systems, https://www.gov.uk/government/consultations/postgraduate-study-student-loans-and-other-support